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ABSTRACT

To determine the average time students take to complete an associate degree, certificate, or diploma, Harrisburg Area Community College (HACC), in Pennsylvania, conducted a study of all 944 students who graduated during the 1991-92 academic year. Data for the sample were gathered related to age, sex, grade point average, academic major, attendance of at least one semester at HACC, credits earned at HACC at time of graduation, year started at the college, and number of semesters attended. Study findings included the following: (1) 63% of the graduates were female, 94% were white, and the mean age was 29.6 years old; (2) on average, degrees were achieved in 5.6 years, certificates in 5.3 years, and diplomas in 1.2 years; (3) about 60% of degree certificate students graduated in 4 or fewer years; (4) for degree students, those who attended at least one semester full-time graduated sooner than those attending only part-time; (5) age was the most important predictor of time taken to complete a degree, with nearly all of the students 22 years or younger graduating in 4 years and less than half of the students older than 22 doing so; (6) GPA was also related to enrollment periods, with students with higher GPA's tending to graduate sooner than those with lower GPA's; and (7) while the time needed to graduate decreased as the number of transfer credits increased, the difference was slight. Nine data tables are included. (KP)

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## EXECUTIVE SUMMARY

This report examined the average amount of time which HACC students take to complete their degrees. The report included the 944 students who graduated in school year 1991-92 and examined both the time and number of semesters in which these students graduated. On average degree graduates completed their degree in 5.6 years, certificate graduates completed their programs in 5.3 years, and diploma graduates completed in 1.2 years. About 60 percent of degree and certificate students graduated in 4 or fewer years. A similar pattern was found for the number of semesters a student was enrolled, with the majority of students completing in 8 semesters.

Graduation times varied by enrollment status (i.e., full-time or parttime status), student GPA, age, and major, with age being the most important predictor of the time taken to complete a degree. In addition, the number of credits earned and student age were the strongest determinants of the number of semesters enrolled.

The report also examined how the transfer of credits affected a student's time at HACC. Overall the findings indicate that students who did not transfer credits completed in 5.7 years, while students who transferred credits completed in 5.2 years. The years needed to graduate decreased as the number of transfer credits increased; for instance students who transferred over 30 credits graduated in three years.

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*1992 GRADUATE TIME STUDY*

## I. INTRODUCTION

The purpose of this study was to determine the average time a student takes to complete an associate degree, certificate and/or diploma at Harrisburg Area Community College (HACC) and to establish whether this time varies for different types of students. Accurate data related to this subject have not been available before and the findings from this study can now provide an avenue to examine current perceptions about graduation times. The findings form a basis from which to assess educational policies and activities affecting student program completion.

## II. METHODOLOGY

The population employed in this study were all students who graduated during the 1991-92 academic year. The analysis included the following data which was collected from enrollment records for each student:

1. AGE
2. SEX
3. GRADE POINT AVERAGE (GPA)
4. ACADEMIC MAJOR
5. WHETHER THE STUDENT ATTENDED HACC AT LEAST ONE SEMESTER AS A FULL-TIME STUDENT
6. CREDITS EARNED AT HACC AT TIME OF GRADUATION
7. YEAR STUDENT STARTED AT HACC
8. NUMBER OF SEMESTERS STUDENT ATTENDED HACC

The number of semesters was coded twice: the first coding counted all summer semesters (in a given year) as one semester, while the second counted each summer session (i.e., six, eight, and twelve weeks) as an individual semester. The results described will be for the first coding of semesters, i.e., all summer semesters in a given year counted as one, since there were no major differences between the two codings.

It is important to note that this report does not attempt to assess student continuity of enrollment. Students may have "stepped-in" and "stepped-out" during their time at HACC, but this report does not capture this information. Therefore, the report does not measure the

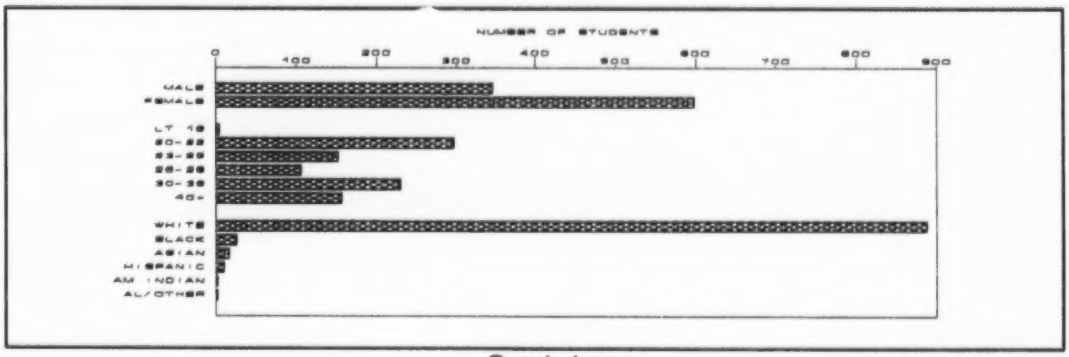
actual time a student attended classes at HACC, but rather the time from when they were first enrolled to the time they completed a degree.

Two other limitations of the data should be noted. The enrollment status variable, i.e., whether or not a student attended at least one semester full-time, may not accurately reflect full-time/part-time status. For instance, a student who attended seven semesters part-time and their eighth semester full-time would be included in the same group as a student who attended four semesters on a full-time basis. This coding obscures the division between full-time and part-time students. In addition, students who received multiple degrees were not identified in the data set. A student may have received a degree, certificate or diploma prior to their 1992 graduation, but this is not reflected in the data.

The data was analyzed using the Statistical Package for the Social Sciences (SPSS). Simple frequency counts were obtained and bivariate tests were conducted. The chi-square statistic was used to assess the relationship between variables independently and a contingency coefficient was calculated to determine the strength of relationships. An analysis of variance was also used to establish the collective relationship between significant variables.

## III. DESCRIPTIVE INFORMATION

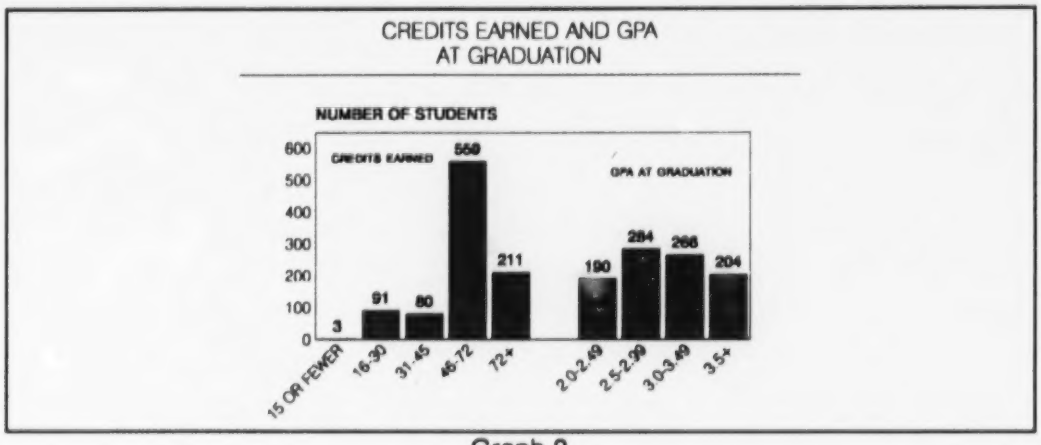
A total of 944 students graduated during school year 1991-92. As shown in Graph 1,




Graph 1

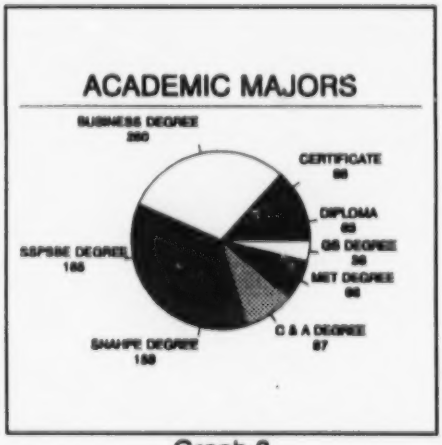
the majority were female (63%) and white (94%). The mean age of graduates was 29.6 years and about half (N=453) were under the age of 25. Detailed demographic information on graduates is presented in Appendix A.

The majority of graduates (72%) began their studies at HACC in 1987 or later, although several had started as early as the mid 1960's. As shown in Graph 2, 81 percent of graduates had earned over 45 credits at HACC at the time of their graduation and 211 students completed over 72 credits. Half of the graduates had a GPA of 3.0 or more.




Graph 2

The majority of students graduated from degree programs. As in previous years, Business and Management Services (BMS) graduated the largest number of degree students followed by the Science, Nursing, Allied Health, and Physical Education majors (SNAHPE); and Social Sciences, Public Safety, and Basic Education majors (SSPSBE). Communication and Arts (C&A), Math Engineering Technology (MET),and General Studies each graduated fewer than 100 students. About equal numbers of students graduated from diploma and certificate programs.




Graph 3

## IV. STUDENT TIME AT HACC BY PROGRAM

The number of years which students spent to complete a program ranged from 1 to 28 years with the average student (including diploma, certificate, and degree students) requiring 5.3 years to graduate. As shown in Table 1, diploma students finished their program in 1.2 years, certificate students finished in 5.3 years and degree students completed in 5.6 years. The difference between diploma students and degree students is reasonable since diploma programs require only about a third of the credits as a degree; however, it is surprising that certificate and degree students do not differ more in their completion times since certificates require only about half of the credits as a degree.

Table 1
Time Spent at HACC by Program for All Students

| PROGRAM | NUMBER OF STUDENTS | AVERAGE YEARS FOR COMPLETION | % STUDENTS GRADUATING IN 4 YEARS | AVERAGE NUMBER OF SEMESTERS | AVERAGE CREDITS EARNED |
|---|---|---|---|---|---|
| DIPLOMA | 63 | 1.2 | 100% | 2.4 | 20.0 |
| CERTIFICATE | 66 | 5.3 | 58% | 7.8 | 52.8 |
| BUSINESS | 17 | 6.6 | 53% | 8.3 | 47.2 |
| SNAHPE | 38 | 4.1 | 66% | 6.9 | 54.8 |
| SSPSBE | 6 | 5.8 | 67% | 7.0 | 47.7 |
| MET | 5 | 9.0 | 0% | 11.8 | 63.0 |
| DEGREE | 815 | 5.6 | 60% | 8.9 | 64.9 |
| BUSINESS | 280 | 6.2 | 55% | 9.7 | 63.4 |
| SNAHPE | 159 | 5.2 | 60% | 9.5 | 71.3 |
| SSPSBE | 185 | 5.7 | 64% | 8.1 | 62.9 |
| MET | 66 | 4.9 | 62% | 9.1 | 67.5 |
| C & A | 87 | 4.1 | 72% | 6.9 | 62.1 |
| GEN STUDIES | 38 | 6.7 | 50% | 9.0 | 59.8 |
| TOTAL | 944 | 5.3 | 63% | 8.4 | 61.0 |

Table 1 also shows that about 60 percent of both degree and certificate students graduated within four years. However, there was some variation in this rate: none of the MET certificate students graduated within four years (however only five students graduated from MET programs) and only 50 percent of General Studies graduates completed in four years. Other programs had higher rates: 72 percent of C&A degree graduates and 67 percent of SSPSBE certificate students completed in four years.

There are other interesting differences between the degree and certificate students. For example, compared to other certificates, SNAHPE *certificate* students completed their programs in the shortest number of semesters, but SNAHPE *degree* students required the greatest number of semesters to graduate. This pattern is probably due to the greater number of credits required to graduate from SNAHPE programs compared to other degrees.

One reason for the relatively long time certificate students take to complete their programs may be that they are graduating from multiple programs. A number of students complete coursework for certificates as they work on their degree and receive both a degree and certificate at graduation. (The data set used in this analysis did not contain the information required to identify prior degrees.) A second reason may be due to their part-time status. Forty percent of certificate students had never attended a semester full-time compared to only 22 percent of degree students. In addition, only 30 percent of all students attended 2 or more semesters a year. About half attended between 1 and 2 semesters per year, while 15 percent attended less than 1 semester per year.

Other differences exist between the programs. For instance, males were much more likely to enter diploma and certificate programs than females (Signif=.000; CC=.248). Ninety percent of women but only 80 percent of men are in degree programs. In addition, traditional students, i.e., those under 25, are more likely to be enrolled in degree programs (Signif.=.000; CC=.302). About 90 percent of students aged 20-25 were in degree programs compared to 80 percent of students over age 30. The grade point averages of students in the three programs also vary greatly. Over 60 percent of students in diploma programs had GPAs over 3.5, compared to only 20 percent of degree graduates and 11 percent of certificate recipients.

## V. TIME SPENT AT HACC – DEGREE STUDENTS

Since the three programs have vastly different credit requirements and the majority of students are degree students, the remaining analysis will focus on degree students. As shown in Table 2, about 15 percent of degree graduates completed within two years, while 60 percent graduated within four years. This varied by enrollment status; students who attended at least one semester full–time graduated quicker than students who attended only part–time (Signif.=.000; CC=.322). About 70 percent of students who attended at least one semester full–time graduated within four years, but only 29 percent of part–time students did so.

**Table 2**
**Completion Time by Enrollment Status for Degree Students**

| Years | Total Students | Students FT at least one semester | Students never FT |
|---|---|---|---|
| 1–2 | 118 (15%) | 107 (17%) | 11 (6%) |
| 3–4 | 372 (46%) | 331 (52%) | 41 (23%) |
| 5–10 | 220 (27%) | 143 (22%) | 77 (44%) |
| 11+ | 105 (13%) | 57 (9%) | 48 (27%) |
| **Total** | **815 (100%)** | **638 (100%)** | **177 (100%)** |

As expected, the number of credits earned by a student at HACC was related to their time at HACC (Signif.=.000; CC=.223). Students who graduated with 30 or fewer credits (i.e., students who transferred at least 30 credits to HACC) were much more likely to graduate within 2 years. In contrast, students who earned over 45 credits spent more time at HACC, although most still spent 4 years or less. (Further analysis of transfer vs. nontransfer students is presented in Section VII of this report.) There were no significant differences by gender or race/ethnicity.

As shown in Table 3, age was strongly related to the time spent at HACC; older, nontraditional students required more time to complete their degrees (Signif.=.000;CC=.581). For example, nearly all traditional college–age students (22 years or less) graduated within 4 years compared to less than half of the remaining adult students. This relationship may be

influenced by age since previous reports have found that older adults were more apt to enroll part–time. This relationship will be examined in further detail through an ANOVA presented later in this report.

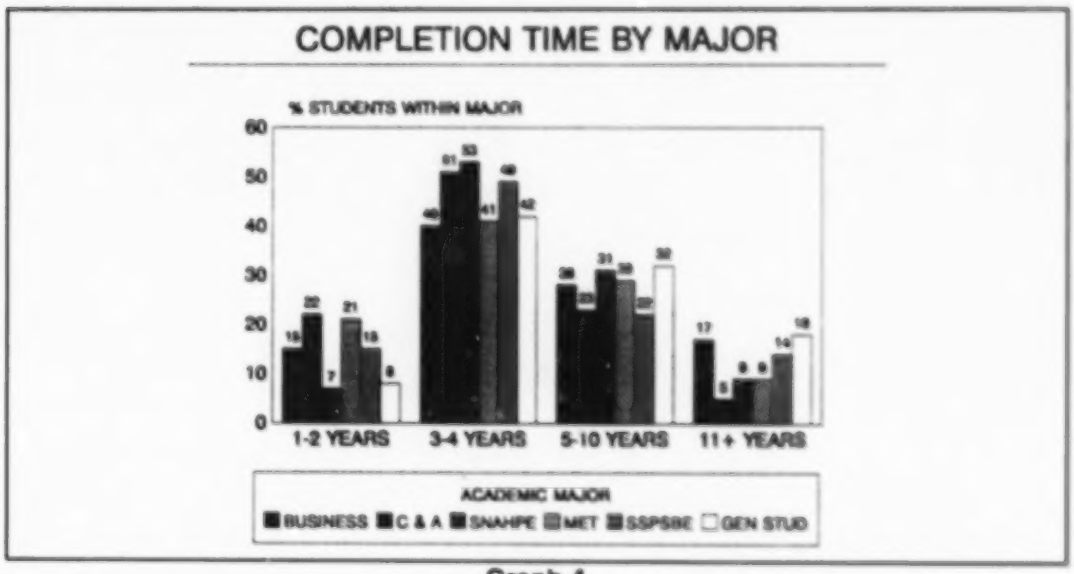
**Table 3**
**Chi Square – Time Spent at HACC by Age Group**

| | | AGE GROUP | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | LT 19 | 20–22 | 23–25 | 26–29 | 30–39 | 40+ | **Total** |
| YEARS | 1–2 | 2<br>2%(r)<br>100%(c) | 71<br>60%(r)<br>25%(c) | 16<br>14%(r)<br>12%(c) | 7<br>6%(r)<br>8%(c) | 14<br>12%(r)<br>7%(c) | 8<br>7%(r)<br>7%(c) | **118**<br>**15%** |
| | 3–4 | 0<br>–<br>– | 206<br>55%(r)<br>73%(c) | 54<br>15%(r)<br>39%(c) | 26<br>7%(r)<br>29%(c) | 57<br>15%(r)<br>29%(c) | 29<br>8%(r)<br>27%(c) | **372**<br>**46%** |
| | 5–10 | 0<br>–<br>– | 4<br>2%(r)<br>1%(c) | 67<br>31%(r)<br>49%(c) | 55<br>25%(r)<br>61%(c) | 59<br>27%(r)<br>30%(c) | 35<br>16%(r)<br>32%(c) | **220**<br>**27%** |
| | 11+ | 0<br>–<br>– | 1<br>1%(r)<br>.4%(c) | 0<br>–<br>– | 2<br>2%(r)<br>2%(c) | 65<br>62%(r)<br>33%(c) | 37<br>35%(r)<br>34%(c) | **105**<br>**13%** |
| | **Total** | **2**<br>**.2%** | **282**<br>**35%** | **137**<br>**17%** | **90**<br>**11%** | **195**<br>**24%** | **109**<br>**13%** | **815**<br>**100%** |

Chi Square = 416.03 DF = 15 Significance =.000 Contingency Coefficient = .581
r = row percentage c = column percentage

A student's GPA was also related to enrollment periods (Signif.=.000; CC=.192). Students with higher GPAs tended to graduate sooner than other students. This is understandable considering that students with lower GPAs may need to repeat courses. However, the relationship found here is somewhat surprising since many high–GPA students are older and attend part–time which would result in longer completion times. This relationship will be explored further through the analysis of variance.

A student's graduating major also was related to the time enrolled (Signif.=.000; CC=.201) as shown in Graph 4. Business and General Studies graduates tended to require the longest times to complete their degrees. For instance, almost 20 percent of BMS and General Studies students required over 10 years to graduate, but less than 10 percent of C&A, SNAHPE, and MET students required this much time to graduate. In addition, compared to other programs, a greater proportion of C&A and MET students tended to graduate within 2 years.




**Graph 4**

The evidence of a relationship between the time required to graduate and age, full-time status, and major, indicated that a further analysis of the data was warranted. An analysis of variance (ANOVA) was conducted in order to test the effects of each of the variables on the time enrolled. The results of the ANOVA are shown in Table 4.

**Table 4**
**ANOVA – Time Spent at HACC by Credits, Age, Major, GPA, and FT/PT Status**

| Source of Variation | Sum of Squares | DF | Mean Square | F | Significance of F |
|---|---|---|---|---|---|
| Main Effects | 276.14 | 17 | 16.24 | 35.72 | .000 |
| Age | 158.40 | 5 | 31.68 | 69.67 | .000 |
| Credits | 36.93 | 3 | 12.31 | 27.07 | .000 |
| GPA | 28.23 | 3 | 9.42 | 20.72 | .000 |
| FT/PT | 15.53 | 1 | 15.53 | 34.15 | .000 |
| Major | 6.88 | 5 | 1.38 | 3.03 | .010 |
| Explained | 276.14 | 17 | 16.24 | 35.72 | .000 |
| Residual | 362.42 | 797 | .46 | | |
| Total | 638.56 | 814 | .78 | | |

All of the variables retained their significance and age is the strongest predictor of time spent at HACC. Although credits earned and academic major both had rather strong relationships to time enrolled in the bivariate analysis, age far outweighed their effect in this multivariate analysis. Together, the five variables were able to explain about half of the variance in the model ($R^2$=.432), with age contributing over half of the total. Taking into account all student characteristics, age was the most important determinant in predicting the length of time a student was enrolled at HACC. It is interesting to note that the enrollment status indicator lost much of its strength as a predictor in the ANOVA. As explained in the Methodology section, this indicator is somewhat indistinct in differentiating between full–time and part–time students which may affect its predictive ability.

## VI. NUMBER OF SEMESTERS ENROLLED – DEGREE STUDENTS

The number of semesters a student was enrolled and the number of years they spent at HACC are highly correlated (Signif=.000; Correlation=.68). This suggests that the two variables will show similar patterns in their relationships to the other variables of study.

The average degree student required 7.9 semesters to graduate from HACC. (NOTE: This average counts all summer sessions in a given year as one semester.) As shown in Table 5, only eight percent of the students graduated in four or fewer semesters, while almost 40 percent required over eight semesters to graduate. This varied by enrollment status; students who attended at least one semester full–time graduated in much less time than students who attended only part–time (Signif=.000; CC=.377). Over 70 percent of part–time students required more than 8 semesters to graduate, but only 26 percent of students who were full–time students at least once required this many semesters.

**Table 5**
**Semesters Enrolled by Enrollment Status**

| Number of Semesters | Total Number of Students | Students FT at least one semester | Students never FT |
|---|---|---|---|
| 1–2 | 7 (.9%) | 7 (1.1%) | 0 (0%) |
| 3–4 | 66 (8.1%) | 56 (8.8%) | 10 (5.6%) |
| 5–6 | 248 (30.4%) | 232 (36.4%) | 16 (9.0%) |
| 7–8 | 199 (24.4%) | 177 (27.7%) | 22 (12.4%) |
| 9+ | 295 (36.2%) | 166 (26.0%) | 129 (72.9%) |
| **Total** | **815 (100%)** | **638 (100%)** | **177 (100%)** |

Students with higher GPAs also tended to graduate sooner than other students (Signif.=.000; CC=.189). For example, 17 percent of students with GPAs over 3.5 graduated within four semesters compared to less than 9 percent of all other graduates. As discussed earlier, this may be due to such factors as repetition of courses for students with low GPAs. However, the relationship may disappear or decrease when the influence of age and major are controlled for as found in the previous ANOVA.

Similar to the relationship found for time spent at HACC, students who were enrolled for a greater number of semesters tended to have more credits (Signif.=.000; CC=.423). However, the relationship between credits earned and number of semesters was stronger than that for time spent at HACC. The greater strength of the relationship is reasonable given that

a student who skips a semester is not credited with attending a semester, but the period for that semester is counted towards the time spent at HACC for this report.

As shown in Table 6, age was also related to the length of enrollment; older, nontraditional students required more semesters to complete their degrees (Signif.=.000; CC=.500). About 70 percent of graduates over age 30 required more than eight semesters to graduate, while less than 35 percent of younger students (25 years or less) required this many semesters.

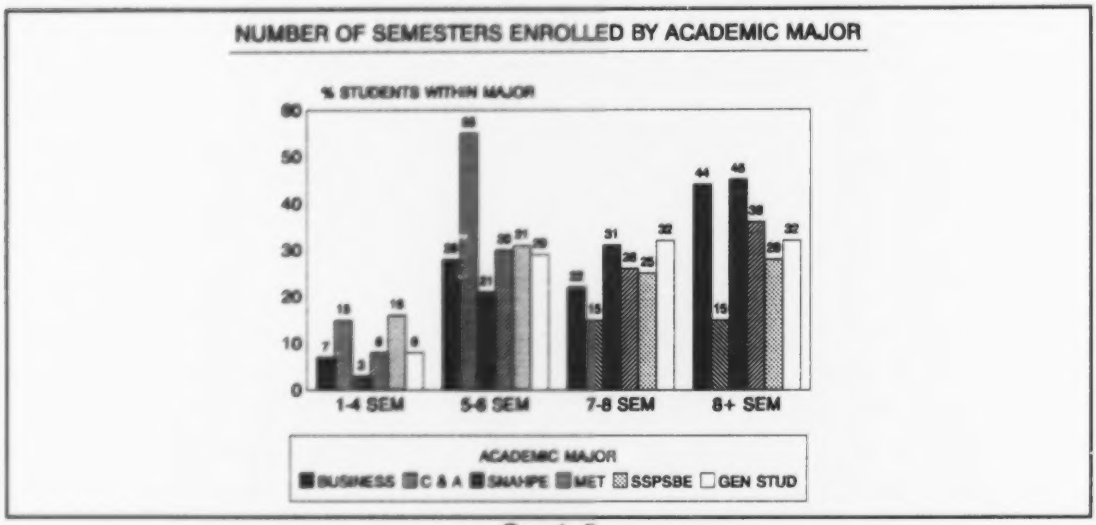
**Table 6**
**Chi Square – Semesters Enrolled by Age Group**

| | | 3-AGE GROUP | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | LT 19 | 20-22 | 23-25 | 26-29 | 30-39 | 40+ | **Total** |
| SEMESTERS | 1-2 | 0<br>–<br>– | 5<br>71%(r)<br>2%(c) | 1<br>14%(r)<br>1%(c) | 0<br>–<br>– | 0<br>–<br>– | 1<br>14%(r)<br>1%(c) | **7**<br>**1%** |
| | 3-4 | 2<br>3%(r)<br>100%(c) | 32<br>49%(r)<br>11%(c) | 20<br>30%(r)<br>15%(c) | 4<br>6%(r)<br>4%(c) | 6<br>9%(r)<br>3%(c) | 2<br>3%(r)<br>2%(c) | **66**<br>**8%** |
| | 5-6 | 0<br>–<br>– | 151<br>61%(r)<br>54%(c) | 38<br>15%(r)<br>28%(c) | 16<br>7%(r)<br>18%(c) | 25<br>10%(r)<br>13%(c) | 18<br>7%(r)<br>17%(c) | **248**<br>**30%** |
| | 7-8 | 0<br>–<br>– | 75<br>38%(r)<br>27%(c) | 36<br>18%(r)<br>26%(c) | 26<br>13%(r)<br>29%(c) | 47<br>24%(r)<br>24%(c) | 15<br>8%(r)<br>14%(c) | **199**<br>**24%** |
| | 9+ | 0<br>–<br>– | 19<br>6%(r)<br>7%(c) | 42<br>14%(r)<br>31%(c) | 44<br>15%(r)<br>49%(c) | 117<br>40%(r)<br>60%(c) | 73<br>25%(r)<br>67%(c) | **295**<br>**36%** |
| | **Total** | **2**<br>**.2%** | **282**<br>**35%** | **137**<br>**17%** | **90**<br>**11%** | **195**<br>**24%** | **109**<br>**13%** | **815**<br>**100.0** |

Chi Square = 260.9 DF = 20 Significance =.000 Contingency Coefficient = .500
r = row percentage c = column percentage

A student's graduating major also was related to the number of semesters enrolled (Signif.=.000; CC=.302) as shown in Graph 5. Business, SNAHPE, and MET students tended to take longer to complete their degrees; almost 50 percent of Business and SNAHPE students and over 40 percent of MET students required more than eight semesters to com-

plete their degrees. Since this pattern is similar to that found for time enrolled, it is expected that academic major will remain a less important predictor of semesters enrolled in the multivariate analysis.




Graph 5

In order to better define the relationship between semesters enrolled and age, credits, enrollment status, and major, an ANOVA was conducted. The results of the ANOVA are shown in Table 8. The results show that each of the variables remain significant, but credits earned and age were the strongest predictors of the number of semesters students were enrolled at HACC. This differs somewhat from the findings for time spent at HACC. In that relationship, age strongly outweighed all other variables, including credits earned. Choice of academic major was also a predictor, along with enrollment status, but each explained only a small portion compared to the other variables. Although their effect remained significant, the power of gender and GPA to explain a student's time at HACC was slight. The total amount of explained variance was 52.9 percent (MCA – Multiple $R^2$ = .529) with credits earned and age being the major contributors to this.

**Table 8**
**ANOVA – Semesters Enrolled by Credits, Major, Age, GPA, Sex, and FT/PT Status**

| Source of Variation | Sum of Squares | DF | Mean Square | F | Significance of F |
|---|---|---|---|---|---|
| Main Effects | 452.62 | 17 | 26.63 | 52.58 | .000 |
| Credits | 147.06 | 3 | 49.02 | 96.80 | .000 |
| Age | 142.12 | 5 | 28.42 | 56.13 | .000 |
| FT/PT | 46.61 | 1 | 46.61 | 92.05 | .000 |
| GPA | 35.09 | 3 | 11.70 | 23.10 | .000 |
| Major | 16.42 | 5 | 3.28 | 6.48 | .000 |
| Explained | 452.62 | 17 | 26.63 | 52.58 | .000 |
| Residual | 403.59 | 797 | .51 | | |
| Total | 856.21 | 814 | 1.05 | | |

The importance of credits earned as a predictor in semesters enrolled contrasts sharply with its lack of predictive power for time at HACC. The difference suggests that students may be stopping their education intermittently. More detailed data, such as that found in a student tracking system, would be required in order to determine the continuity of student enrollment and how this affects their total time spent at HACC. However, one finding mentioned earlier does support the intermittent nature of attendance: only 30 percent of students attended two or more semesters per year during their time at HACC, while 70 percent attended less than two.

## VII. TRANSFER OF CREDITS AND COMPLETION TIME – DEGREE STUDENTS

One factor which affects the time a student spends at HACC is the transfer of credits. In order to determine whether students who transfer credits from other institutions spend less time at HACC, a separate analysis was conducted. Although an exact count of transfer credits was not available, an approximate indicator for the number of transfer credits was

calculated for degree students.[1] As shown in Table 9, of the 815 students who completed a degree program, 183 students transferred credits. About 10 percent of all degree students transferred 10 or fewer credits, while 12 percent transferred over 10 credits.

**Table 9**
**Credits Transferred and Completion Times for Degree Students**

| | Number of Graduates | Average Years for Completion | Average Semesters for Completion |
|---|---|---|---|
| Students with No Transfer Credits | 632 | 5.7 | 9.5 |
| Students with Transfer Credits | 183 | 5.2 | 6.9 |
| 1–10 Credits | 75 | 5.8 | 8.3 |
| 11–20 Credits | 53 | 5.3 | 6.6 |
| 21–30 Credits | 35 | 4.8 | 5.6 |
| Over 30 Credits | 20 | 3.0 | 4.4 |

It is surprising that the two groups are so similar in their completion times, with only about a half–year difference. Students who did not transfer credits finished in about 5.7 years while students who transferred credits completed in about 5.2 years. However, he time transfer students needed to complete their degrees did decrease with more transfer credits. Students with over 30 transfer credits finished in about three years as compared to almost six years for those with less than 10 transfer credits.

The difference in number of semesters enrolled was slightly larger. On average, transfer students enrolled for about 2.5 fewer semesters than non–transfer students. Again

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[1]. All students must complete a minimum of 60 credits to graduate from a degree program. Transfer credits were calculated by subtracting the students credits earned at HACC from 60. The difference should consist only of transfer credits. One limit of this indicator relates to students in programs which require more than 60 credits; for example, the Mechanical Engineering Technology degree requires 74 credits and Radiologic Technology requires 79. The number of transfer credits for students in these types of programs will be understated since the base credits would be greater than 60.

the number of semesters attended declined as the number of transfer credits increased: students with more than 30 transfer credits completed in 4.4 semesters compared to 8.3 semesters for students with 1 to 10 transfer credits.

## VIII. SUMMER SESSION ENROLLMENT

Throughout this analysis, the results presented for semesters have been for the semester coding which included all summer sessions because there were no major differences in the results. In this section, students who attended 0 or only 1 summer session are compared to those who attended more than 1 summer session in a given year.

Only 30 percent of all graduates attended more than 1 summer session, while 70 percent attended either 1 or no summer sessions. There were a few differences between the two groups. Students in Business, SNAHPE, and MET were more likely to take several summer sessions as compared to students in other majors (Signif.=.002; CC=.145). In addition, adult students also tended to register for multiple summer sessions (Signif.=.000; CC=.194). About 45 percent of students age 26 to 40 were enrolled in more than one summer session, compared to only 30 percent of students age 25 and under. Also, proportionally more part-time students were enrolled in several summer sessions as compared to those who attended at least once full-time (Signif.=.001; CC=.103). Although the relationships between these variables were significant, the low values for the contingency coefficient indicate that the relationships were not strong.

## IX. SUMMARY

This study examined both the time and number of semesters which students at HACC require to graduate. Graduates in the 1991-92 school year required an average of 5.3 years and 8.4 semesters to complete their degrees. About 60 percent of students graduated within 4 years, although this varied by enrollment status. As expected, part-time students required more time to complete their degrees than full-time students. Women also took longer than men, but when other variables were introduced, gender lost its significance as a predictor.

Number of credits, age, and academic major were strongly related to both semesters and time spent at HACC. However, in the multivariate analysis, age of a student was the most important determinant to the time spent at HACC and age and credits earned were strongly related to the number of semesters students required to graduate.

It is important to remember that this study did not attempt to assess the continuity of student enrollment. No measurement was undertaken to determine whether students attended courses continuously throughout their HACC career, or more likely, whether they "stepped–in" and "stepped–out" over time. Several findings from this report suggest that this may be the case for a large number of students.

# APPENDICES

| GENDER | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| Male | 346 | 36.7 | 36.7 |
| Female | 598 | 63.3 | 100.0 |
| TOTAL | 944 | 100.0 | |

| RACE/ETHNICITY | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| African American | 26 | 2.8 | 2.8 |
| Hispanic | 10 | 1.1 | 3.9 |
| Asian | 16 | 1.7 | 5.6 |
| American Indian | 2 | 0.2 | 5.8 |
| Caucasian | 888 | 94.1 | 99.9 |
| Alien/Other | 2 | 0.2 | 100.0 |
| TOTAL | 944 | 100.0 | |

| AGE | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| Less than 20 years | 4 | 0.4 | 0.4 |
| 20–22 Years | 297 | 31.5 | 31.9 |
| 23–25 Years | 152 | 16.1 | 48.0 |
| 26–29 Years | 105 | 11.1 | 59.1 |
| 30–39 Years | 230 | 24.4 | 83.5 |
| 40 Years and Over | 156 | 16.5 | 100.0 |
| TOTAL | 944 | 100.0 | |

| ACADEMIC MAJOR | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| Business | 297 | 31.5 | 31.5 |
| SNAHPE | 197 | 20.9 | 52.4 |
| SSPSBE | 191 | 20.2 | 72.6 |
| Communication & Arts | 87 | 9.2 | 81.8 |
| MET | 71 | 7.5 | 89.3 |
| Diploma | 63 | 6.7 | 96.0 |
| General Studies | 38 | 4.0 | 100.0 |
| TOTAL | 944 | 100.0 | |

| TOTAL CREDITS EARNED | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| 15 Or Fewer Credits | 3 | 0.3 | 0.3 |
| 16–30 Credits | 91 | 9.6 | 9.9 |
| 31–45 Credits | 80 | 8.5 | 18.4 |
| 46 Or More Credits | 770 | 81.6 | 100.0 |
| TOTAL | 944 | 100.0 | |

| GRADE POINT AVERAGE AT GRADUATION | | | |
|---|---|---|---|
| | FREQUENCY | PERCENT | CUMULATIVE % |
| 2.00 – 2.49 | 190 | 20.1 | 20.1 |
| 2.50 – 2.99 | 284 | 30.1 | 50.2 |
| 3.00 – 3.49 | 266 | 28.2 | 78.4 |
| 3.50 And Over | 204 | 21.6 | 100.0 |
| TOTAL | 944 | 100.0 | |

**Time Spent at HACC by Academic Major for Degree Students**

| | | MAJOR | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | BUSINESS | C & A | SNAHPE | MET | SSPSBE | GEN STUD | Total |
| YEARS | 1–2 | 43<br>36%(r)<br>15%(c) | 19<br>16%(r)<br>22%(c) | 11<br>9%(r)<br>7%(c) | 14<br>12%(r)<br>21%(c) | 28<br>24%(r)<br>15%(c) | 3<br>3%(r)<br>8%(c) | 118<br>15% |
| | 3–4 | 111<br>30%(r)<br>40%(c) | 44<br>12%(r)<br>51%(c) | 84<br>23%(r)<br>53%(c) | 27<br>7%(r)<br>41%(c) | 90<br>24%(r)<br>49%(c) | 16<br>4%(r)<br>42%(c) | 372<br>46% |
| | 5–10 | 78<br>36%(r)<br>28%(c) | 20<br>9%(r)<br>23%(c) | 50<br>23%(r)<br>31%(c) | 19<br>9%(r)<br>29%(c) | 41<br>19%(r)<br>22%(c) | 12<br>6%(r)<br>32%(c) | 220<br>27% |
| | 10+ | 48<br>46%(r)<br>17%(c) | 4<br>4%(r)<br>5%(c) | 14<br>13%(r)<br>9%(c) | 6<br>6%(r)<br>9%(c) | 26<br>25%(r)<br>14%(c) | 7<br>7%(r)<br>18%(c) | 105<br>13% |
| | **Total** | **280**<br>**34%** | **87**<br>**11%** | **159**<br>**20%** | **66**<br>**8%** | **185**<br>**23%** | **38**<br>**5%** | 815<br>100% |

Chi Square = 34.4 DF = 15 Significance = .003 Contingency Coefficient = .201
r = row percentage c = column percentage

**Semesters Enrolled by Academic Major – Degree Students**

| | | MAJOR | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | BUSINESS | C & A | SNAHPE | MET | SSPSBE | GEN STUD | Total |
| SEMESTERS | 1–2 | 3<br>43%(r)<br>1%(c) | 1<br>14%(r)<br>1%(c) | 0<br>–<br>– | 2<br>29%(r)<br>3%(r) | 1<br>14%(r)<br>.5%(c) | O<br>–<br>– | 7<br>1% |
| | 3–4 | 15<br>23%(r)<br>5%(c) | 12<br>18%(r)<br>14%(c) | 5<br>8%(r)<br>3%(c) | 3<br>5%(r)<br>5%(c) | 28<br>42%(r)<br>15%(c) | 3<br>5%(r)<br>8%(c) | 66<br>8% |
| | 5–6 | 79<br>32%(r)<br>28%(c) | 48<br>19%(r)<br>55%(c) | 33<br>13%(r)<br>21%(c) | 20<br>8%(r)<br>30%(c) | 57<br>23%(r)<br>31%(c) | 11<br>5%(r)<br>29%(c) | 248<br>30% |
| | 7–8 | 61<br>31%(r)<br>22%(c) | 13<br>7%(r)<br>15%(c) | 49<br>25%(r)<br>31%(c) | 17<br>9%(r)<br>26%(c) | 47<br>24%(r)<br>25%(c) | 12<br>6%(r)<br>32%(c) | 199<br>24% |
| | 9+ | 122<br>41%(r)<br>44%(c) | 13<br>4%(r)<br>15%(c) | 72<br>24%(r)<br>45%(c) | 24<br>8%(r)<br>36%(c) | 52<br>18%(r)<br>28%(c) | 12<br>4%(r)<br>32%(c) | 295<br>36% |
| | **Total** | **280**<br>**34%** | **87**<br>**11%** | **159**<br>**20%** | **66**<br>**8%** | **185**<br>**23%** | **38**<br>**5%** | 815<br>100.0 |

Chi Square = 81.7 DF = 20 Significance = .000 Contingency Coefficient = .302
r = row percentage c = column percentage